

## Citation Analysis of Doctoral Theses: A Case of Shivaji University, Kohlapur 1997-2012

Shobha G. Dolas<sup>1</sup> ● Shalini M. Sakharkar<sup>2</sup>

<sup>1</sup>Sou. Mangltai Ramchandra Jagatap Mahila Mahavidhyalya, Umbraj

<sup>2</sup>Balerao Science College, Saoneor

Email Id: [shobhadol2@gmail.com](mailto:shobhadol2@gmail.com)<sup>1</sup> ● [drshalinifulmali958@gmail.com](mailto:drshalinifulmali958@gmail.com)<sup>2</sup>

**ABSTRACT:** Citation analysis is an emerging trust area of research in the field of library and Information science. Citations are very important source of information for the library purchasing and to provide services to the researcher. In the present paper, research productivity of doctoral theses awarded in the subject of Physics by Shivaji University during 1972-2012. The study is based on the 22270 citations taken out from 104 PhD theses physics. In these researchers articles research is carried out chronological productivity, Gender wise researcher, Gender wise Guide, authorship pattern wise, cited sources wise distribution, classification of Doctoral theses.

**Keywords:** Bibliometric, analysis, Authorship pattern, Citation analysis, Cited sources

### 1. Introduction and Review of Literature

Citation analysis is a worthwhile are of research. "Citation analysis" refers to references in one text to another text, with information on where that text a found. Citation analysis is useful for understanding subject relationships, author effectiveness, and publication trends and so on. With citation analysis one can evaluate and interpret citations cited articles, new bulleting, books, report, journals, film, conferences, handbook, theses, association report, notes and other indications of scientific activity. The present study analyses the citations cited by the researcher in the theses of physics accepted by Shivaji University, Kolhapur during 1972-2012. Citation analysis is a set of method of analyzing the scientific & technological. Literature & to trace the relationship, among science of physics citation such as:

- A bolometric analysis of contribution in the Research articles 'LIS Link Newsletter' written by Garg K.C., CSIR-NISTADS, New Delhi and Kavita, Maharaja Agrasen institutive of Technology, Rohini , Delhi.
- A Bibliometric Study of paper presented at the International Conference "The Role of

Science and Technology in global Development is analysed Authorship pattern of Contributions he finds the study of single author percentage 51.4% by used authors paper 24.4%and mostly used as above.

- DJLIT: A Bibliometric study (2003-2012) written by Ramesh Pandita he find the volume wise authorship pattern of article ,volume wise distribution of articles , geographical distribution of contribution ,contributors and authors he find that most of contributors and authors from India considering the 23 country number rank obtained to India Singapore is ranked on second number UK is ranked on third number and so on.
- S. Thanuskodi from Annamalai university he find Instituted wise contribution referencing character characteristics ,forms of documents cited as 53.03% is journals , 22.32% books, 12.55% seminar / conference these position of citation shows mostly of journals.
- A bibliometric analysis of contribution in the journal 'Library Trends' written by Taapas Kumar Das Mr. of Visva-Bharati central library santiniketan is analysed degree of collaboration, average length of contribution , distribution of citation Volume wise Distribution i.e. he find the study of citation year wise percentage 21.84% Citation used by author, 23.30% citation mostly used by user as above.
- Annals of Library and information Studies: A Bibliometric Study (2002-2010) written by Shalini M. Sakharkar. Foreign countries contributed in this Indian Journal as founding the study of nine volumes it reflects the popularity of the journal. Maximum paper was contributed by B. K. Sen and average length of paper was 6 pages (63). And Single author's domination.

## 2. Objective of the Study

This study has been undertaken with the prime objective of following aspects

- i. To trace the chronological growth of research
- ii. The study authorship pattern
- iii. To study Gender wise researcher
- iv. To study Gender wise Guide
- v. To study cited sources wise distribution

### 3. Methodology

The Study covers 104 thesis containing references total 22270 during year 1972-2012 was collected from Shivaji University, Kolhapur library. The data collected was recorded on to sheets with pre-designed columns. All the required data like (a) title of thesis, (b) Subject, (c) number of authors, (d) number of references, (e) document were tabulated. The data was subjected to the analysis as per the objective of the study.

### 4. Data Analysis

#### 4.1 Chronological growth of research

Table 1 presents the year wise growth of PhD theses awarded by Shivaji University in the subject of physics during 1972-2012. In the year 1990 has highest number of references 1677 (7.53%) followed by 2001 stand second and 2007 stand third. The year 1977 has the minimum number of 217(0.97%) references. It shows that research productivity was highest in the year of 1986 (1.14%) stand first followed by 1987 stand second.

**Table -1:** Chronological growth of research

Year	Year wise number of total theses	No. of References	Percentage
1977	1	217	0.97
1986	1	254	1.14
1987	1	255	1.14
1988	4	479	2.15
1989	3	567	2.54
1990	6	1677	7.53
1991	3	432	1.93
1992	5	1228	5.51
1993	1	108	0.48
1994	4	1075	4.82
1995	5	1201	5.39
1996	2	445	1.99
1997	2	447	2.00
1999	4	915	4.10
2000	5	1041	4.67
2001	8	1584	7.11
2002	4	665	2.98
2003	3	548	2.46
2004	3	762	3.42
2005	6	1253	5.62
2006	4	941	4.22
2007	6	1434	6.43
2008	6	966	4.33

2009	4	1157	5.19
2010	7	1401	6.29
2011	3	558	2.50
2012	3	660	2.96
Total	104	22270	100

## 4.2 Authorship pattern

Table 2 explicates the authorship pattern of contribution, out of 22270 contributions. A single author has contributed 6982 out of the total citations. 6346 of the articles contributed by double authors and 4264 of the articles contributed by triple authors and 447 of the articles contributed by four author's negligible amount is contributed by more than four authors. A significant note of the study is that the majority of the articles are contributed by Single authors. This will necessitate the individual authorship pattern.

**Table -2:** Authorship pattern

Year	One author	Two author	Three author	Four Author more than	Not mention author	Total	Per. %
1977	129	77	8	3	0	217	0.97
1986	112	81	41	18	2	254	1.14
1987	119	92	36	6	2	255	1.14
1988	160	171	86	60	2	479	2.15
1989	170	216	107	71	3	567	2.54
1990	652	532	338	145	10	1677	7.53
1991	186	129	69	24	24	432	1.93
1992	345	378	316	184	5	1228	5.51
1993	49	48	8	3	0	108	0.48
1994	431	335	202	97	10	1075	4.82
1995	338	358	275	205	25	1201	5.39
1996	145	121	113	59	7	445	1.99
1997	148	167	89	41	2	447	2.00
1999	233	310	185	180	7	915	4.10
2000	439	312	152	134	4	1041	4.67
2001	873	337	164	193	17	1584	7.11
2002	162	192	126	174	11	665	2.98
2003	157	170	114	105	2	548	2.46
2004	233	195	139	181	14	762	3.42
2005	344	326	248	324	11	1253	5.62
2006	212	239	206	266	18	941	4.22
2007	391	384	279	369	11	1434	6.43
2008	173	284	209	292	8	966	4.33

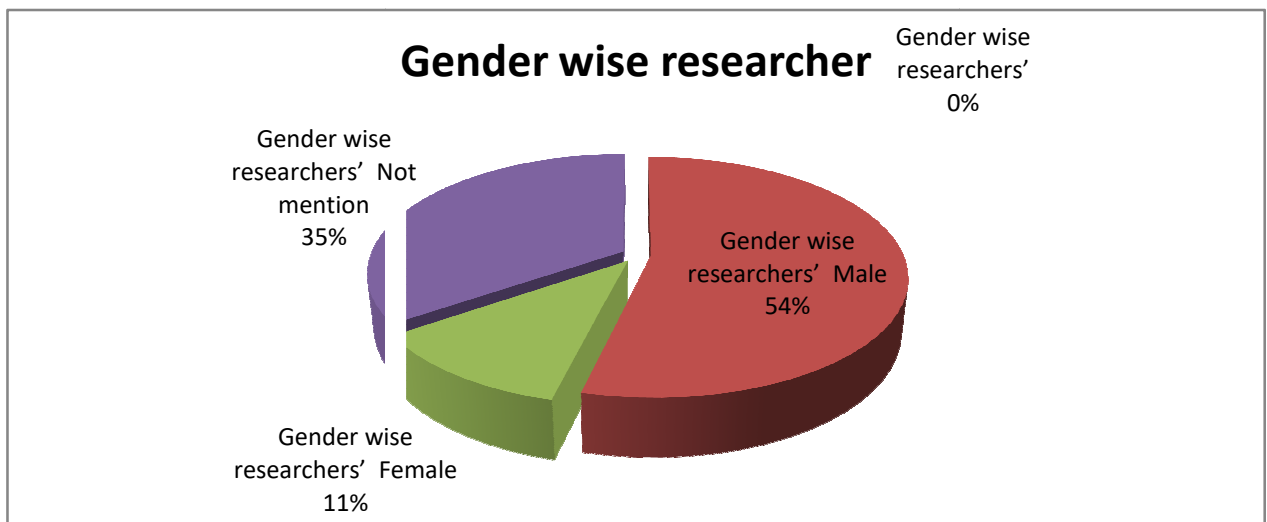
2009	221	268	258	410	0	1157	5.19
2010	322	354	299	421	5	1401	6.29
2011	141	133	85	186	13	558	2.50
2012	97	137	112	296	18	660	2.96
	6982	6346	4264	4447	231	22270	100

### 4.3 Gender wise researcher information

Table 3 shows that researcher's information Gender wise. The Majority number of contribution is from Male 56 (53.8%), females researchers only 12(11.53%).And not mentions male and female total 36(34.61).

**Table 3:** Gender wise researchers' information

Gender	Total Researcher	Percentage
Male	56	53.8
Female	12	11.53
Not mention	36	34.61
Total	104	100

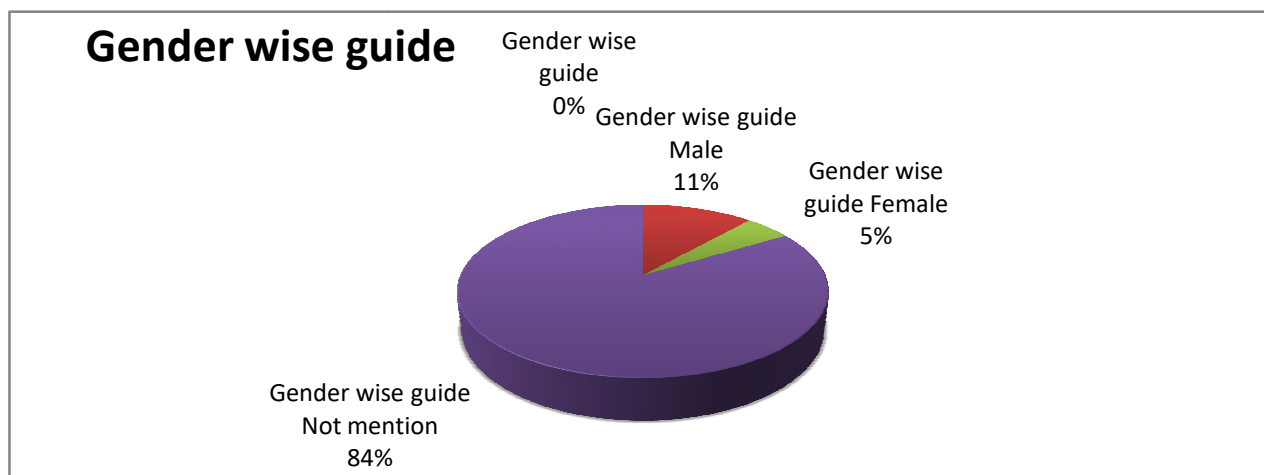


### 4.4 Gender Wise Guide Information

Table 4 shows the distribution of research Guides Genders. The table clearly indicates that 12 (11.53 %) theses awarded under the Male Guidance and 5 (4.80%) theses awarded under the guidance of female. and not mentions gender wise guide 87(83.65%).

**Table 4: Gender wise guide**

Gender	Total Researcher	Percentage
Male	12	11.53
Female	5	4.80
Not mention	87	83.65
Total	104	100



#### 4.5 Form wise Cited Documents

**Table 5: Form wise Cited Documents**

Year	Books	Journal	Theses	Review	Bulletin	Lecture etc.	Letter	Films	Conf. /Works.	Website	Others	Total
1977	67	85	3	25	1	0	0	0	36	0	0	217
1986	130	73	0	33	3	0	2	0	13	0	0	254
1987	107	80	2	38	2	1	0	0	25	0	0	255
1988	236	126	14	44	15	0	23	12	6	0	3	479
1989	258	215	10	30	14	5	12	4	19	0	0	567
1990	681	607	15	147	51	29	56	26	59	0	6	1677
1991	246	96	3	34	9	7	14	4	19	0	0	432
1992	582	341	13	97	82	4	42	28	32	4	4	1228
1993	77	26	0	0	4	1	0	0	0	0	0	108
1994	539	330	24	94	21	17	7	1	28	0	14	1075
1995	628	310	10	75	77	11	20	24	35	8	3	1201
1996	200	143	8	20	37	2	11	16	7	0	1	445
1997	223	103	8	26	13	11	17	1	44	0	1	447
1999	466	239	10	15	48	4	27	66	30	0	10	915
2000	502	324	38	73	51	7	14	12	17	0	3	1041
2001	685	562	16	99	68	31	24	8	75	1	15	1584
2002	340	141	4	42	46	6	48	6	31	0	1	665

2003	301	138	0	10	9	6	11	62	7	0	4	548
2004	381	206	5	53	44	7	29	6	31	0	0	762
2005	538	442	8	32	34	20	51	85	24	0	19	1253
2006	473	249	9	23	43	12	34	74	22	1	1	941
2007	704	369	30	38	55	28	58	114	27	0	11	1434
2008	480	304	7	34	34	19	20	31	25	3	9	966
2009	450	180	4	42	132	22	236	44	41	1	5	1157
2010	689	482	12	43	30	16	50	44	33	0	2	1401
2011	222	227	4	36	2	7	45	1	2	7	5	558
2012	374	196	3	8	5	12	21	15	4	19	3	660
<b>Total</b>	<b>10579</b>	<b>6594</b>	<b>260</b>	<b>1211</b>	<b>930</b>	<b>285</b>	<b>872</b>	<b>684</b>	<b>692</b>	<b>44</b>	<b>119</b>	<b>22270</b>
<b>%</b>	<b>47.5</b>	<b>29.6</b>	<b>1.67</b>	<b>5.43</b>	<b>4.17</b>	<b>1.27</b>	<b>3.91</b>	<b>3.07</b>	<b>3.1</b>	<b>0.19</b>	<b>0.53</b>	<b>100</b>

Distribution of various forms of cited documents are given table. They include Books, Journals, Theses, Review, Bulletin, Lecture notes, Letter, Conference/workshop Proceedings etc. The table shows that general cited of references occupied the top position with the highest number of 1677 year of 1990 .Total citation 22270. The second position occupied by Information and Announcements 1584 year of 2001 and followed by flowering Trees stand third with 1434 year of 2007. Thus the study manifests the forty years of research productivity Doctoral theses awarded by Shivaji university, Kolhapur during 1972-2012 in the subject of “Physics ”.As many as 104 PhD theses were produced so far in the year 1972-2012.In the cited documents 22270 studied by the researcher.

## 5. Conclusions

- In the years 1990 has highest number of cited documents 1677(7.53%).
- Single authors were contributed 6982 out of the total citations
- The Majority number of contribution is from Male 56 (53.8 %),
- 4.12 (11.53 %) theses awarded under the Male Guidance.
- 6. Majority of cited documents from forerunners (1677).

## 6. References

Dolas Shobha G. and Sakharkar, Shalini, Conferenceproceedings: Qualitative Information services in AcademicLibrary, Nov 2014.Kolhapur

Dolas Shobha G., Shakharkar, Shalini R., Citation Analysis of Doctoral Theses Awarded by ShivajiUnissversity, Kolhapur During 1972-2012in The subject of “Mathematics., E-Library Science Research Journal .Dec.2016 :73-80

Korade ,S.B., SakharkarShalini R., Current Science Bibliometric Study form 2009-2012 :International Conference on Entrepreneurial Approaches to Librarianship, Dec.2013: 555-563

Korade, S.B., A Bibliometric Study: Journal of Chemical Science, (210-2014),, International Journal of Business, Management and Social Sciences, Vol.V,Issue I(IV), Oct.2015:43-49

Sakharkar, Shalini R., Annals if Library and Information studies: A Bibliometric Study, Contemporary Research in India, Vol. 1(3) Sept., 2011: 202-208.

Sakharkar, Shalini R., Library Progress International journal: Research Productivity of Doctoral Theses awarded by R.T.M.Nagapur University, Nagpur 2005-2008:A study , Vol.31 issue no.2(Julyy-Dec.)2011

<https://www.nrpa.org/globalassets/journals/jlr/1999/volume-31/jlr-volume-31-number-2-pp-171-180.pdf>

[https://www.ncbi.nlm.nih.gov/pubmed/?term=Vishwanatham%20R%5BAuthor%5D&cauthor=true&cauthor\\_uid=9803294](https://www.ncbi.nlm.nih.gov/pubmed/?term=Vishwanatham%20R%5BAuthor%5D&cauthor=true&cauthor_uid=9803294)